



## SEQUENCE LISTING

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Rigel Pharmaceuticals, Incorporated

RECEIVED

SEP 17 1997

FBI CENTER 15372506

<120> TRAC1: Modulators of Lymphocyte Activation

<130> 021044-000600US

<140> US 09/998,667

<141> 2001-12-03

<150> US 60/282,432

<151> 2001-04-06

<160> 18

<170> PatentIn Ver. 2.1

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 Gln Val Ser His Thr Leu Phe Tyr Asp Asp Phe Ile Asp Phe Asn Ile  
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<223> cDNA encoding truncated version of human TRAC1

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 Ile Arg His Leu Gln Val Ser His Thr Leu Phe Tyr Asp Asp Phe Ile  
                   195                  200                  205  
 Asp Phe Asp Ile Ile Glu Glu Ala Ile Ile Arg Arg Val Leu Asp Arg  
                   210                  215                  220  
 Ser Leu Leu Glu Tyr Val Asn Gln Ser Asn Thr Thr Phe Tyr Asp  
                   225                  230                  235

<210> 8

<211> 228

<212> PRT

<213> Homo sapiens

<220>

<223> znf313 sequence with ring domain

<400> 8

Met Ala Ala Gln Gln Arg Asp Cys Gly Gly Ala Ala Gln Leu Ala Gly  
           1                  5                  10                  15  
 Pro Ala Ala Glu Ala Asp Pro Leu Gly Arg Phe Thr Cys Pro Val Cys  
                   20                  25                  30  
 Leu Glu Val Tyr Glu Lys Pro Val Gln Val Pro Cys Gly His Val Phe  
                   35                  40                  45  
 Cys Ser Ala Cys Leu Gln Glu Cys Leu Lys Pro Lys Lys Pro Val Cys  
           50                  55                  60

Gly Val Cys Arg Ser Ala Leu Ala Pro Gly Val Arg Ala Val Glu Leu  
 65 70 75 80  
 Glu Arg Gln Ile Glu Ser Thr Glu Thr Ser Cys His Gly Cys Arg Lys  
 85 90 95  
 Asn Phe Phe Leu Ser Lys Ile Arg Ser His Val Ala Thr Cys Ser Lys  
 100 105 110  
 Tyr Gln Asn Tyr Ile Met Glu Gly Val Lys Ala Thr Ile Lys Asp Ala  
 115 120 125  
 Ser Leu Gln Pro Arg Asn Val Pro Asn Arg Tyr Thr Phe Pro Cys Pro  
 130 135 140  
 Tyr Cys Pro Glu Lys Asn Phe Asp Gln Glu Gly Leu Val Glu His Cys  
 145 150 155 160  
 Lys Leu Phe His Ser Thr Asp Thr Lys Ser Val Val Cys Pro Ile Cys  
 165 170 175  
 Ala Ser Met Pro Trp Gly Asp Pro Asn Tyr Arg Ser Ala Asn Phe Arg  
 180 185 190  
 Glu His Ile Gln Arg Arg His Arg Phe Ser Tyr Asp Thr Phe Val Asp  
 195 200 205  
 Tyr Asp Val Asp Glu Glu Asp Met Met Asn Gln Val Leu Gln Arg Ser  
 210 215 220  
 Ile Ile Asp Gln  
 225

<210> 9  
 <211> 245  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <223> STRIN sequence with rign domain

<400> 9  
 Met Ala Glu Asp Leu Ser Ala Ala Thr Ser Tyr Thr Glu Asp Asp Phe  
 1 5 10 15  
 Tyr Cys Pro Val Cys Gln Glu Val Leu Lys Thr Pro Val Arg Thr Thr  
 20 25 30  
 Ala Cys Gln His Val Phe Cys Arg Lys Cys Phe Leu Thr Ala Met Arg  
 35 40 45  
 Glu Ser Gly Ala His Cys Pro Leu Cys Arg Gly Asn Val Thr Arg Arg  
 50 55 60  
 Glu Arg Ala Cys Pro Glu Arg Ala Leu Asp Leu Glu Asn Ile Met Arg  
 65 70 75 80  
 Lys Phe Ser Gly Ser Cys Arg Cys Cys Ala Lys Gln Ile Lys Phe Tyr  
 85 90 95



Arg Met Arg His His Tyr Lys Ser Cys Lys Lys Tyr Gln Asp Glu Tyr  
 100 105 110  
 Gly Val Ser Ser Ile Val Pro Asn Phe Gln Ile Ser Gln Asp Ser Val  
 115 120 125  
 Gly Asn Ser Asn Arg Ser Glu Thr Ser Thr Ser Asp Asn Thr Glu Thr  
 130 135 140  
 Tyr Gln Glu Asn Thr Ser Ser Ser Gly His Pro Thr Phe Lys Cys Pro  
 145 150 155 160  
 Leu Cys Gln Glu Ser Asn Phe Thr Arg Gln Arg Leu Leu Asp His Cys  
 165 170 175  
 Asn Ser Asn His Leu Phe Gln Ile Val Pro Val Thr Cys Pro Ile Cys  
 180 185 190  
 Val Ser Leu Pro Trp Gly Asp Pro Ser Gln Ile Thr Arg Asn Phe Val  
 195 200 205  
 Ser His Leu Asn Gln Arg Arg Gln Phe Asp Tyr Gly Glu Phe Val Asn  
 210 215 220  
 Leu Gln Leu Asp Glu Glu Thr Gln Tyr Gln Thr Ala Val Glu Glu Ser  
 225 230 235 240  
 Phe Gln Val Asn Ile  
 245

<210> 10

<211> 50

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:human TRAC1  
 (FLJ20456) ring finger domain

<400> 10

Val Thr Ser Phe Asp Cys Ala Val Cys Leu Glu Val Leu His Gln Pro  
 1 5 10 15

Val Arg Thr Arg Cys Gly His Val Phe Cys Arg Ser Cys Ile Ala Thr  
 20 25 30

Ser Leu Lys Asn Asn Lys Trp Thr Cys Pro Tyr Cys Arg Ala Tyr Leu  
 35 40 45

Pro Ser  
 50

<210> 11

<211> 50

<212> PRT

<213> Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence:human znf313  
ring finger domain

&lt;400&gt; 11

Leu	Gly	Arg	Phe	Thr	Cys	Pro	Val	Cys	Leu	Glu	Val	Tyr	Glu	Lys	Pro
1				5				10					15		

Val	Gln	Val	Pro	Cys	Gly	His	Val	Phe	Cys	Ser	Ala	Cys	Leu	Gln	Glu
			20					25					30		

Cys	Leu	Lys	Pro	Lys	Lys	Pro	Val	Cys	Gly	Val	Cys	Arg	Ser	Ala	Leu
		35					40					45			

Ala	Pro
	50

&lt;210&gt; 12

&lt;211&gt; 50

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence:human STRIN  
ring finger domain

&lt;400&gt; 12

Glu	Asp	Asp	Phe	Tyr	Cys	Pro	Val	Cys	Gln	Glu	Val	Leu	Lys	Thr	Pro
1				5				10					15		

Val	Arg	Thr	Thr	Ala	Cys	Gln	His	Val	Phe	Cys	Arg	Lys	Cys	Phe	Leu
			20					25					30		

Thr	Ala	Met	Arg	Glu	Ser	Gly	Ala	His	Cys	Pro	Leu	Cys	Arg	Gly	Asn
		35					40					45			

Val	Thr
	50

&lt;210&gt; 13

&lt;211&gt; 50

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence:human TRAF6  
ring finger domain

&lt;400&gt; 13

Glu	Ser	Lys	Tyr	Glu	Cys	Pro	Ile	Cys	Leu	Met	Ala	Leu	Arg	Glu	Ala
1				5				10					15		

Val	Gln	Thr	Pro	Cys	Gly	His	Arg	Phe	Cys	Lys	Ala	Cys	Ile	Ile	Lys
			20					25					30		

Ser	Ile	Arg	Asp	Ala	Gly	His	Lys	Cys	Pro	Val	Asp	Asn	Glu	Ile	Leu
		35					40					45			

Leu Glu  
50

<210> 14  
<211> 50  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:human c-Cbl  
ring finger domain

<400> 14  
Ser Thr Phe Gln Leu Cys Lys Ile Cys Ala Glu Asn Asp Lys Asp Val  
1 5 10 15

Lys Ile Glu Pro Cys Gly His Leu Met Cys Thr Ser Cys Leu Thr Ser  
20 25 30

Trp Gln Glu Ser Glu Gly Gln Gly Cys Pro Phe Cys Arg Cys Glu Ile  
35 40 45

Lys Gly  
50

<210> 15  
<211> 50  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:human BRCA1  
ring finger domain

<400> 15  
Leu Glu Cys Pro Ile Cys Leu Glu Leu Ile Lys Glu Pro Val Ser Thr  
1 5 10 15

Lys Cys Asp His Ile Phe Cys Lys Phe Cys Met Leu Lys Leu Leu Asn  
20 25 30

Gln Lys Lys Gly Pro Ser Gln Cys Pro Leu Cys Lys Asn Asp Ile Thr  
35 40 45

Lys Arg  
50

<210> 16  
<211> 50  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:human BAR ring  
finger domain

Trp Glu  
50

<210> 17

<211> 49

&lt;212&gt; PRT

<213> Artificial Sequence

 $\langle 220 \rangle$ 

```
<223> Description of Artificial Sequence:human RAG1 ring
finger domain
```

<400> 17

Glu Thr Asn Cys Lys His Val Phe Cys Arg Val Cys Ile Leu Arg Cys  
20 25 30

Leu Lys Val Met Gly Ser Tyr Cys Pro Ser Cys Arg Tyr Pro Cys Phe  
35 40 45

Pro

<210> 18

<211> 200

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:flexible linker

<220>

<221> MOD RES

 $\langle 222 \rangle \quad (6) \quad \bar{\cdot} \cdot (200)$ 

<223> Gly at positions 6-200 may be present or absent

<400> 18

Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly  
                20                    25                    30

Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly  
          35                        40                        45

Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly  
           50                              55                              60

Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly  
       65                              70                              75                              80

Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly  
                               85                              90                              95

Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly  
                               100                              105                              110

Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly  
                               115                              120                              125

Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly  
       130                              135                              140

Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly  
       145                              150                              155                              160

Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly  
                               165                              170                              175

Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly  
                               180                              185                              190

Gly Gly Gly Gly Gly Gly Gly Gly  
       195                              200